

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07327 0 7-33-19

SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

2SB553

INDUSTRIAL APPLICATIONS

Unit in mm

HIGH CURRENT SWITCHING APPLICATIONS.

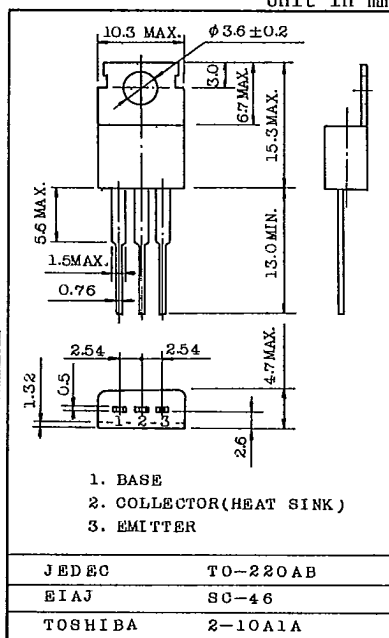
POWER AMPLIFIER APPLICATIONS.

FEATURES:

- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4V$ (Max.) at $I_C = -4A$
- Complementary to 2SD553.

MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-70	V
Collector-Emitter Voltage		V_{CEO}	-50	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current		I_C	-7	A
Collector Power Dissipation	$T_a = 25^\circ C$	P_C	1.5	W
	$T_c = 25^\circ C$		40	
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55~150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -70V, I_E = 0$	-	-	-30	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -5V, I_C = 0$	-	-	-50	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -50mA, I_B = 0$	-50	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE(sat)}$	$V_{CE} = -1V, I_C = -1A$	70	-	240	
	$h_{FE(2)}$		$V_{CE} = -1V, I_C = -4A$	30	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -4A, I_B = -0.4A$	-	-0.2	-0.4	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -4A, I_B = -0.4A$	-	-0.9	-1.2	
Transition Frequency		f_T	$V_{CE} = -4V, I_C = -1A$	-	10	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1 MHz$	-	250	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.2	-	μs
	Storage Time	t_{stg}		-	2.5	-	
	Fall Time	t_f		-	0.5	-	

Note : $h_{FE(1)}$ Classification 0 : 70~140, Y : 120~240

TOSHIBA CORPORATION

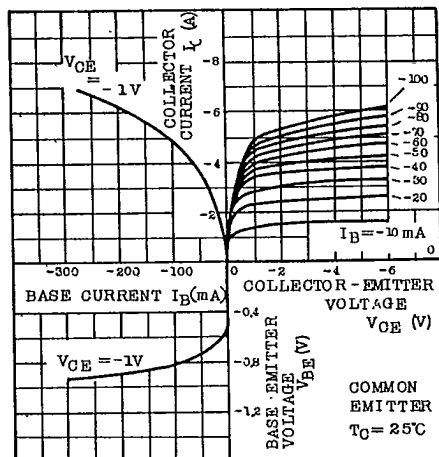
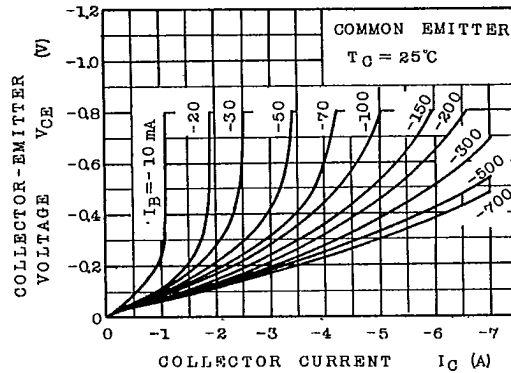
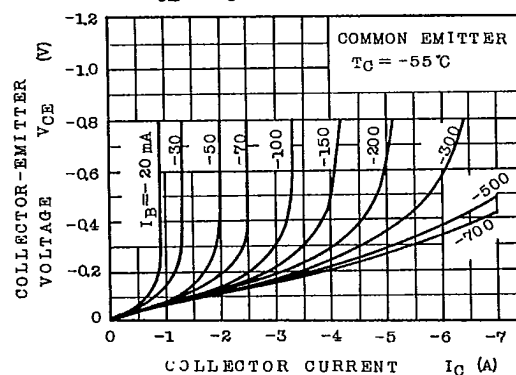
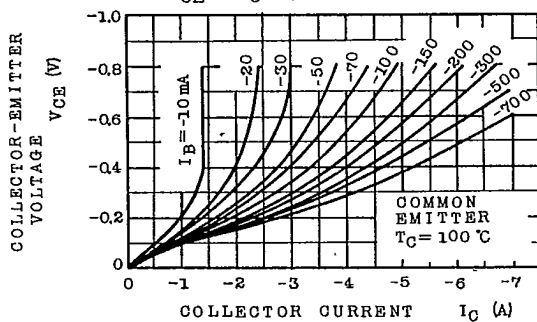
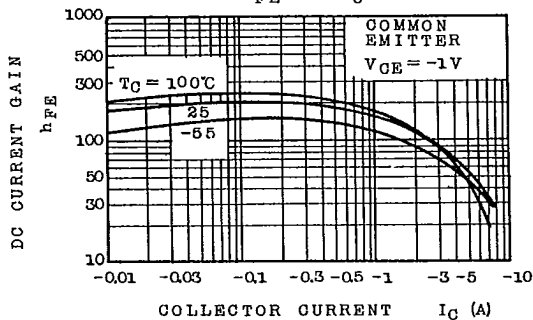
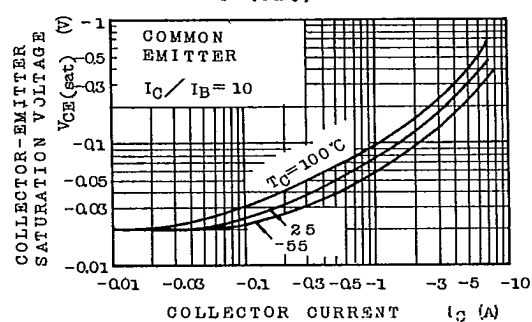
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STATIC CHARACTERISTICS

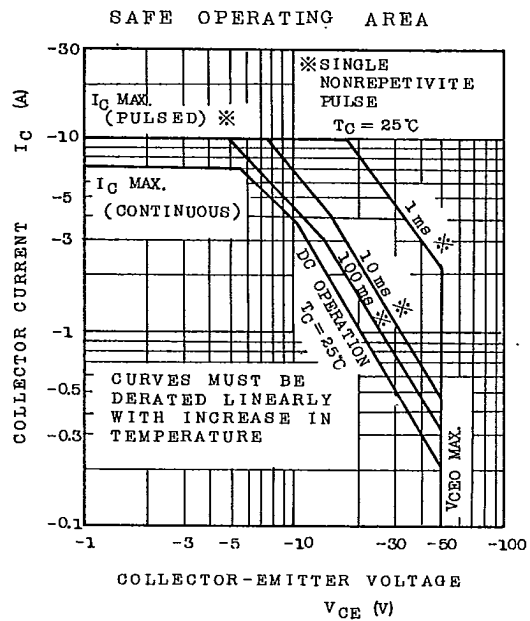
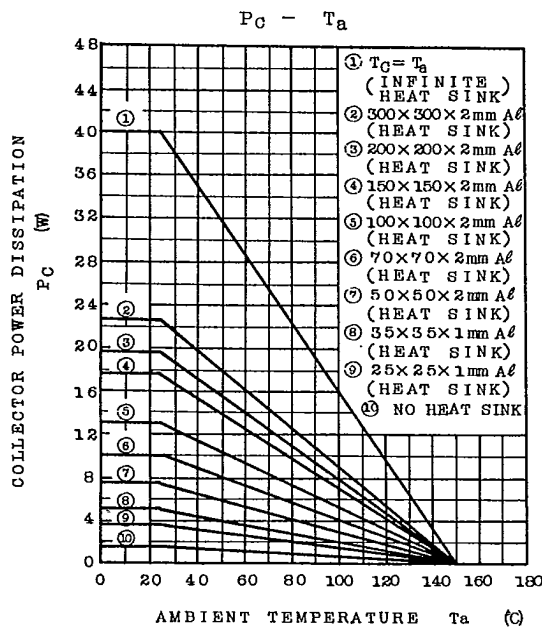
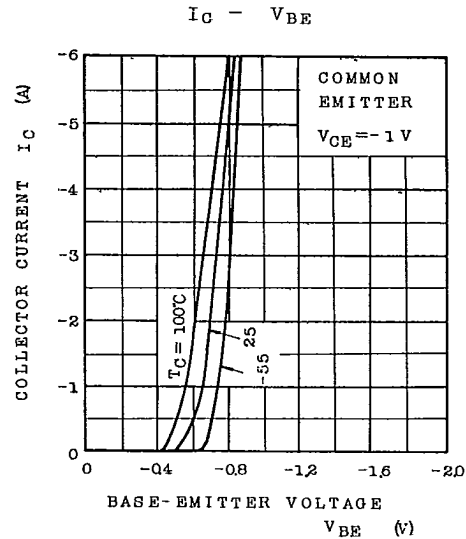
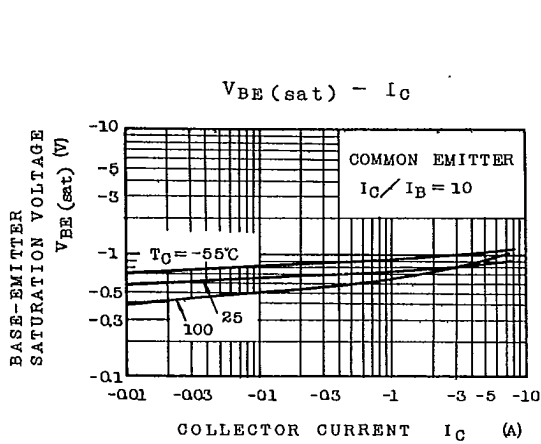
 $V_{CE} - I_C$ (LOW VOLTAGE REGION) $V_{CE} - I_C$ (LOW VOLTAGE REGION) $V_{CE} - I_C$ (LOW VOLTAGE REGION) $h_{FE} - I_C$  $V_{CE(sat)} - I_C$ 

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